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ABSTRACT

Some of the major trends in British Tertiary education are reviewed. Types of schools and/or courses in British secondary education are examined in relation to student preparation for tertiary education. The present system of higher Education in Britian is described including types of institutions and academic structures, admission requirements, enrollment trends, sex and age distribution of enrollments, research in tertiary education, costs of tertiary education and the contribution of tertiary education to the labor market. Tables are provided throughout the report. (SPG)

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TERTIARY EDUCATION IN BRITAIN

NATIONAL REPORT

by

Professor J. EGGLESTON

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TERTIARY EDUCATION IN BRITAIN

National report assembled by Professor J Eggleston
First draft

Section 1: Types of schools and/or of courses in secondary education

All British school pupils receive secondary education and therefore all possess, in principle, the right to enter tertiary education. However as in most school systems, secondary education is not enough; it is usually necessary to obtain the appropriate leaving certificates.

In the recent past, only certain secondary schools provided courses that prepared children to enter the appropriate examinations for entry to tertiary education. These were predominantly the "grammar" schools and the small number of "independent" fee paying schools: some "technical" secondary schools also provided courses. By far the greatest number of children attended "modern" secondary schools where virtually no courses for the relevant certificates existed. However, in the years since 1965 increasing numbers of children have been attending "comprehensive" schools. In such schools all children from an area are admitted without selection and all have, in principle, the opportunity to follow a course leading to entry to tertiary education. The striking changes in the period can be seen from Tables A and B, reprinted from the Department of Education and Science Report No. 87, March 1977.

Almost all comprehensive secondary schools provide a common education for all pupils in the first two or three years from the age of entry; 11 years. Thereafter, pupils may choose or be chosen for courses leading to examinations - O-level and at age 16 and subsequently to the A-level at 18 or 19 - which as we shall discuss later constitute the main passport for entry to tertiary education. In many schools there is considerable transfer into and out of the examination courses. Viewed in one way this can be seen to allow a very open entry to all who seek qualifications for tertiary education. Viewed in reverse, it can be seen to allow pupils who would have "stayed the course" in the grammar schools to opt out and fail to reach university or college. Evidence on the internal transfers in the comprehensive schools is sparse: the autonomy of schools and the relative privacy of their internal organisation means that evidence is confined to a limited number of course studies which offer few reliable generalisations. The evidence that exists has been reviewed in Eggleston, J, 1977, "Research in the Experimental forms of Education of Pupils Aged 10-14 in Britain", in Eggleston, J (ed) Experimental Education for Pupils Aged 10-14, Amsterdam: ets and Zeitlinger.

TABLE A—Comparison of the number of secondary schools 1965–1976 (England and Wales)

Type of school	1965		1966		1967		1968		1969		1970	
	No. of schools	No. of pupils	No. of schools	No. of pupils	No. of schools	No. of pupils	No. of schools	No. of pupils	No. of schools	No. of pupils	No. of schools	No. of pupils
Comprehensive[1]	262	239,619	387	312,281	508	408,056	748	606,362	962	772,612	1,145	937,152
Middle (deemed secondary)	—	—	—	—	—	—	—	—	14	4,470	105	36,549
Grammar	1,285	718,705	1,273	712,968	1,236	694,898	1,155	655,702	1,098	631,948	1,038	604,916
Modern	3,727	1,555,132	3,642	1,524,382	3,494	1,459,377	3,200	1,367,367	2,954	1,303,751	2,691	1,226,619
Technical	172	84,587	150	73,644	141	69,704	121	62,021	109	56,627	82	43,700
Other secondary	417	221,011	346	193,518	350	200,816	352	203,935	331	194,723	324	197,038
Total	5,863	2,819,054	5,798	2,816,793	5,729	2,832,851	5,576	2,895,387	5,468	2,964,131	5,385	3,045,974

Type of school	1971		1972		1973		1974		1975		1976 (provisional)	
	No. of schools	No. of pupils	No. of schools	No. of pupils	No. of schools	No. of pupils	No. of schools	No. of pupils	No. of schools	No. of pupils	No. of schools	No. of pupils
Comprehensive[1]	1,373	1,128,417	1,591	1,337,242	1,335	1,580,406	2,273	2,136,958	2,596	2,459,64	2,878	2,753,327
Middle (deemed secondary)	147	55,286	186	74,932	302	123,265	404	173,145	473	207,344	509	223,081
Grammar	970	573,646	893	540,049	819	496,766	675	411,195	566	343,65[illegible]	477	295,162
Modern	2,464	1,163,442	2,218	1,085,850	1,915	965,753	1,509	856,749	1,216	697,850	1,002	589,286
Technical	67	37,525	58	33,271	43	25,321	35	21,144	29	18,049	23	15,002
Other secondary	274	185,563	266	180,082	245	171,043	183	124,552	155	100,097	93	59,[illegible]42
Total	5,295	3,143,879	5,212	3,251,426	5,159	3,362,554	5,079	3,723,743	5,035	3,[illegible]	4,982	3,935,500

[1] Including sixth form colleges from 1967.

TABLE B—Comprehensive schools and pupils as a percentage of all secondary schools and pupils (England and Wales)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976*
Number of comprehensive and middle deemed secondary schools	262	387	508	748	976	1,250	1,520	1,777	2,137	2,677	3,069	3,387
Comprehensive and middle deemed secondary schools as a percentage of all schools[1]	4·5	6·7	8·9	13·4	17·8	23·2	28·7	34·1	41·4	52·7	61·0	68·0
Number of pupils in comprehensive and middle deemed secondary schools	239,619	312,281	408,056	606,362	777,082	973,701	1,183,703	1,412,174	1,703,671	2,310,103	2,666,992	2,976,408
Pupils in comprehensive and middle deemed secondary schools as a percentage of all pupils[1]	8·5	11·1	14·4	20·9	26·2	32·0	37·7	43·4	50·7	[illegible]·0	69·7	75·6

[1] Maintained secondary schools including middle deemed secondary. *provisional

There is little doubt that, overall, the comprehensive schools have enabled a substantial number of their growing population to achieve entry qualifications to tertiary education. Yet as the table shows, progress is slow. This is accounted for by many reasons - notably the predominantly "secondary modern" origins of many of their pupils who have reached the age of 18 in recent years.

Table C

GRAMMAR SCHOOLS - percentage of total leavers

	1964	1970	1972	1974	1975
1 or more A level pass	35.3	48.4	48.7	47.4	50.7
2 or more A level passes	29	39.3	39.5	39.1	42.1

MODERN SCHOOLS - percentage of total leavers

	1964	1970	1972	1974	1975
1 or more A level pass	0.2	0.6	0.9	1.0	1.2
2 or more A level passes	0.1	0.2	0.4	0.5	0.8

COMPREHENSIVE SCHOOLS - percentage of total leavers

	1964	1970	1972	1974	1975
1 or more A level pass	4.9	11.1	11.6	11.1	11.0
2 or more A level passes	3.4	8.2	8.4	8.2	8.3

A useful guide to the take up of courses for entry to tertiary education may be found in the tables for the duration of school life. Only those pupils who are able/willing to stay at school until 18 or 19 can sit the appropriate examination (unless they chose to transfer to a college of further education to take their A-levels as Table E indicates). In the tables that follow, comprehensive schools are grouped with grammar and modern schools into maintained; separate figures are unavailable. But a useful distinction is made between maintained and non-maintained schools: non-maintained schools are predominantly the small group of independent fee paying schools and the "holding power" they exert on pupils until A-level examinations is clearly visible. The second table shows the important regional variations in take up of courses leading to entry to tertiary education.

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Table D (i)

SCHOOLS, PUPILS AND TEACHERS

Percentage of pupils remaining at school beyond the statutory leaving age(1)

(i) By type of school, 1965 and 1970 to 1976

	1965	1970	1971	1972	1973	1974	1975	1975	1976
Age at beginning of January									
All maintained schools(2)									
Boys and girls									
15	40·2	54·8	56·3	58·0	58·6	23·4	23·7	23·7	25·2
16	22·9	32·1	32·9	34·3	34·0	18·0	17·8	17·3	18·6
17	11·4	17·3	17·8	18·4	18·7	6·1	5·8	5·8	6·0
18	4·1	5·7	6·0	6·1	6·1	0·4	0·4	0·4	0·4
19	0·4	0·5	0·5	0·5	0·5				
All non-maintained schools(2)									
Boys and girls									
15	88·3	91·3	91·7	92·5	94·3	68·9	69·0	69·6	68·6
16	69·5	73·7	74·5	75·5	76·3	55·5	56·9	57·4	57·2
17	42·8	51·2	52·0	53·9	55·4	16·2	16·4	16·6	16·9
18	12·9	15·0	15·3	15·7	16·1	1·7	1·7	1·8	1·8
19	1·4	1·5	1·5	1·9	1·7				
All schools(2)									
Boys and girls									
15	44·3	57·7	59·1	60·6	61·3	26·8	27·1	27·0	28·3
16	26·3	35·5	36·2	37·5	37·2	20·8	20·7	20·7	21·4
17	13·9	20·1	20·6	21·2	21·6	6·9	6·6	6·6	6·8
18	4·9	6·5	6·8	6·9	6·9	0·5	0·5	0·5	0·5
19	0·4	0·6	0·6	0·6	0·6				

(1) See paragraphs 32, 33 and 34 of the Explanatory Notes.
(2) Excluding special schools.

Table D (ii)

(ii) In each region(3)
Maintained schools only(2)
January 1976

	North	Yorkshire and Humberside	North West	East Midlands	West Midlands	East Anglia	Greater London	Other South East	South West	England	Wales	England and Wales
Age at beginning of January												
Boys												
16	18·5	22·1	18·4	20·8	22·6	19·3	33·8	29·8	22·8	24·4	26·8	24·5
17	16·0	17·0	14·5	16·4	16·6	14·9	23·5	22·0	16·8	18·3	20·3	18·4
18	5·8	6·3	5·1	5·8	5·9	5·0	8·2	7·5	5·5	6·4	8·4	6·5
19	0·4	0·6	0·4	0·4	0·5	0·3	0·9	0·6	0·4	0·6	1·0	0·6
Girls												
16	20·0	22·7	19·4	20·4	23·5	19·3	37·0	30·9	25·8	25·6	31·3	25·9
17	15·5	17·0	15·3	16·1	17·4	14·4	24·6	22·2	16·8	18·6	21·8	18·3
18	4·8	5·1	4·5	4·8	5·1	3·9	6·5	6·2	4·5	3	6·6	5·4
19	0·1	0·2	0·2	0·1	0·2	0·2	0·5	0·2	0·1	0·2	0·3	0·2
Boys and girls												
16	19·2	22·4	18·9	20·6	23·0	19·2	35·4	30·3	23·3	25·0	29·0	25·2
17	15·7	17·0	14·9	16·3	17·0	14·6	24·0	22·1	16·8	18·5	21·0	18·6
18	5·3	5·7	4·8	5·3	5·5	4·5	7·3	6·9	5·0	5·9	7·6	6·0
19	0·3	0·4	0·3	0·3	0·4	0·2	0·7	0·4	0·3	0·4	0·7	0·4

(1) See paragraphs 32, 33 and 34 of the Explanatory Notes.
(3) For areas covered by regions see paragraph 49 of the Explanatory Notes.
(2) Excluding special schools.

The transfer rates from secondary education are summarised in table E. The table indicates the very wide variations in destinations and take-up of tertiary education. A particular point of difficulty may arise from the "leavers" who enter GCE A and O level courses: there are in fact pupils who enter further education to take certificates that for some reason they did not obtain at secondary school.

Perhaps the most useful table is Table F which presents a very detailed picture of the transfer from school to tertiary education (figures for subsequent years are not yet available). The most striking feature of this picture is that students from comprehensive schools now constitute the largest single group of entrants to tertiary education as a whole and to all institutions <u>other</u> than the Universities of Oxford and Cambridge.

Table E

SCHOOL LEAVERS DURING THE ACADEMIC YEAR 1974–75

Details of leavers by age

(i) Age at 1 January 1975

Thousands

	Boys					Girls				
	15	16	17	18 and over	Total	15	16	17	18 and over	Total
Leavers who had attempted C.S.E. or G.C.E. examinations										
Numbers who had attempted										
"A" level only	—	—	0·54	0·41	0·95	—	—	0·59	0·42	1·01
"A" and "O" levels, but not C.S.E.	0·07	1·07	25·46	17·53	44·13	0·00	0·70	23·60	11·50	36·04
"A" level and C.S.E. but not "O" level	0·14	0·12	0·07	0·04	0·38	0·12	0·11	0·11	0·02	0·37
"A" and "O" levels and C.S.E.	0·13	0·47	11·20	7·41	19·21	0·05	0·48	13·20	5·79	19·60
"O" level only	6·16	7·55	2·57	0·54	16·82	7·99	7·51	2·30	0·38	18·19
"O" level and C.S.E. only	46·02	35·35	6·76	0·99	89·12	50·06	37·18	7·67	0·89	96·59
C.S.E. only	88·93	27·46	0·92	0·03	117·34	81·06	26·95	1·31	0·22	109·55
Total attempting C.S.E. or G.C.E.	141·45	72·02	47·53	26·96	207·96	140·17	73·02	40·66	19·30	281·34
Leavers who had attempted no C.S.E. or G.C.E. examination	32·88	31·39	0·29	0·16	65·73	27·42	20·91	0·37	0·06	56·77
Leavers with "A" level passes										
3 or more higher grade combinations(1)	0·03	0·56	11·25	7·67	19·50	0·01	0·32	8·32	4·33	12·98
3 or more other passes	0·03	0·26	8·06	5·03	13·38	0·01	0·15	6·61	3·14	9·91
2 "A" level passes	0·05	0·21	8·26	5·78	14·30	0·06	0·22	9·53	4·33	14·14
1 "A" level pass	0·16	0·32	5·50	3·94	9·92	0·13	0·36	7·99	3·53	12·00
1 or more "A" level passes	0·27	1·35	33·06	22·41	57·10	0·21	1·05	32·44	15·33	49·04
No "A" level passes										
5 or more higher grade "O" level or C.S.E. results(2)	7·91	9·24	6·08	2·79	26·02	11·41	11·89	7·39	2·25	32·94
1–4 higher grades	44·55	32·41	6·59	1·51	85·05	49·19	33·42	7·07	1·36	91·04
No higher grades										
1 or more other grades	83·39	27·52	1·61	0·17	112·69	75·18	25·43	1·79	0·34	102·74
No G.C.E. or C.S.E. qualifications	39·21	32·89	0·47	0·24	72·81	31·60	30·14	0·53	0·08	62·34
Leavers entering										
Degree courses	0·11	0·40	16·79	11·85	29·14	0·01	0·23	2·46	5·70	16·41
Teacher training courses	0·01	0·01	1·63	1·27	2·92	0·01	0·06	7·68	3·90	11·66
H.N.D./H.N.C. courses	0·02	0·02	0·70	0·65	1·40	0·01	—	0·48	0·20	0·69
O.N.D./O.N.C. courses	1·47	0·97	0·40	0·08	2·92	0·76	0·63	0·14	0·06	1·59
Catering courses	1·03	0·56	0·13	0·03	1·75	1·70	0·99	0·32	0·14	3·14
Nursing courses	0·03	0·02	0·01	—	0·06	3·62	1·75	0·44	0·07	5·83
Secretarial courses	0·07	0·04	—	0·01	0·12	10·60	5·64	1·81	0·63	18·67
G.C.E "A" level courses	1·38	1·32	1·39	0·56	4·65	2·39	1·65	0·85	0·42	5·30
G.C.E. "O" level courses	2·89	1·44	0·21	0·03	4·57	2·51	1·22	0·09	0·01	3·83
Other further education courses	7·02	4·02	3·35	1·81	16·24	8·50	4·82	3·54	1·27	18·23
All full-time further education	14·02	8·82	24·65	16·28	63·77	30·19	16·99	26·01	12·40	85·59
Temporary employment pending entry to										
Degree courses	—	0·22	1·54	0·60	2·37	—	0·14	1·05	0·32	1·52
Teacher training courses	—	—	0·04	0·09	0·13	—	0·01	0·13	0·05	0·19
Other courses	0·07	0·12	0·28	0·10	0·58	0·01	0·12	0·14	0·02	0·29
Total	0·07	0·34	1·87	0·80	3·08	0·01	0·27	1·32	0·39	2·00
Employment	128·48	77·29	15·39	7·08	228·25	106·01	68·23	16·95	5·24	196·44
Destination not known	32·76	16·95	5·91	2·96	58·58	31·37	16·43	4·95	1·33	54·08
Leavers leaving in										
Autumn term, 1974	0·12	2·58	3·02	3·20	8·87	0·09	2·25	1·68	1·00	5·02
Spring term, 1975	7·31	29·13	1·27	0·67	38·58	6·27	27·28	1·07	0·39	34·95
Summer term, 1975	167·91	71·75	43·53	23·04	306 24	161·23	72·41	46·48	17·99	298·11
All leavers	175·34	103·41	47·82	27·12	353·68	167·59	101·93	49·23	19·36	338·11

(ii) Age at 1 September 1974

All leavers	257·52	30·81	55·29	10·06	353·68	248·22	31·72	54·45	3·72	338·11

(iii) Age on leaving school

	School Leaving age	Others aged 16	17	18 and over	Total	School Leaving age	Others aged 16	17	18 and over	Total
All leavers	189·20	76·06	31·04	57·38	353·68	179·03	76·38	32·19	50·51	338·11

Source: Sample survey

(1) For a definition of higher grade "A" level passes see paragraph 23 of the Explanatory Notes.
(2) For a definition of higher grade "O" level (including "O" level passes on "A" level papers) or C.S.E. results see paragraph 54 of the Explanatory Notes.

SCHOOL LEAVERS DURING THE ACADEMIC YEAR 1974-75

Destination of leavers from grant-aided schools and independent schools recognised as efficient

Table F

Thousands

		Maintained schools											Direct grant(2) schools			All grant-aided schools			Independent schools recognised as efficient			Total			
		Modern		Grammar		Comprehensive		Other secondary(1)		All maintained		schools													
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	
	Destination																								
	Degree courses																								
	Universities																								
1	Oxford and Cambridge	—	—	0·93	0·25	0·67	0·23	0·01	—	1·64	0·48	2·12	0·86	0·28	1·14	2·50	0·76	3·26	1·61	0·15	1·76	4·10	0·91	5·01	1
2	London	0·04	—	0·78	0·47	1·31	0·64	0·04	—	2·16	1·11	3·27	0·23	0·23	0·52	2·40	1·40	3·80	0·55	0·25	0·80	2·95	1·66	4·62	2
3	Others in England and Wales	0·07	0·06	4·73	3·48	6·96	4·54	0·27	0·13	12·02	8·20	20·22	2·04	1·62	3·66	14·07	9·82	23·89	2·12	1·11	3·23	16·19	10·93	27·12	3
4	Scotland and Northern Ireland	—	0·01	0·13	0·07	0·18	0·12	—	—	0·31	0·22	0·53	0·07	0·09	0·16	0·33	0·31	0·69	0·16	0·06	0·22	0·54	0·36	0·90	4
5	Outside United Kingdom	—	—	0·02	0·02	0·04	0·01	0·01	—	0·09	0·03	0·11	—	—	—	0·08	0·03	0·11	0·14	0·11	0·25	0·22	0·13	0·36	5
6	Unknown	0·01	—	0·26	0·10	0·26	0·10	0·01	—	0·54	0·19	0·73	0·05	—	0·05	0·59	0·19	0·78	0·13	0·14	0·14	0·71	0·21	0·92	6
7	Total	0·11	0·07	6·85	4·40	9·45	5·64	0·34	0·13	16·75	10·23	26·98	3·26	2·29	5·55	20·01	12·52	32·53	4·71	1·68	6·39	24·72	14·20	38·92	7
8	Polytechnics	0·05	0·01	1·13	0·64	2·10	0·94	0·11	0·03	3·39	1·62	5·01	0·78	0·20	0·48	3·67	1·82	5·48	0·47	0·13	0·60	4·13	1·95	6·08	8
9	Other establishments	—	—	0·07	0·05	0·16	0·16	—	0·01	0·24	0·22	0·45	0·02	0·02	0·04	0·26	0·24	0·50	0·03	0·02	0·05	0·29	0·26	0·55	9
10	Total	0·16	0·08	8·05	5·09	11·71	6·74	0·45	0·16	20·38	12·07	32·45	3·56	2·50	6·06	23·94	14·57	38·51	5·21	1·84	7·04	29·14	16·41	45·55	10
	Teacher training courses																								
11	Polytechnics	—	—	—	0·06	0·02	0·08	—	—	0·02	0·14	0·16	—	—	—	0·02	0·14	0·16	—	—	—	0·02	0·14	0·16	11
12	Other establishments	0·06	0·27	0·78	3·38	1·77	6·57	0·10	0·21	2·70	10·44	13·14	0·12	0·72	0·84	2·82	11·16	13·98	0·09	0·57	0·65	2·91	11·72	14·63	12
13	Total	0·06	0·27	0·78	3·44	1·79	6·65	0·10	0·21	2·72	10·58	13·30	0·12	0·72	0·84	2·84	11·29	14·13	0·09	0·57	0·65	2·92	11·86	14·78	13
	Other courses at Polytechnics																								
14	H.N.D./H.N.C.	0·03	—	0·22	0·15	0·49	0·16	0·04	—	0·78	0·31	1·10	0·04	0·04	0·08	0·82	0·35	1·17	0·13	0·02	0·15	0·95	0·39	1·32	14
15	O.N.D./O.N.C.	0·02	—	0·01	0·04	0·06	0·02	0·01	—	0·11	0·07	0·17	—	—	—	0·11	0·07	0·17	0·02	—	0·02	0·13	0·07	0·20	15
16	G.C.E. "A" level	—	—	0·03	0·02	0·06	0·05	—	0·01	0·09	0·09	0·18	0·01	—	0·01	0·10	0·09	0·19	0·13	0·04	0·18	0·24	0·13	0·37	16
17	G.C.E. "O" level	0·01	—	—	—	0·03	0·01	—	0·01	0·04	0·02	0·06	—	—	—	0·01	0·02	0·06	0·01	—	0·01	0·05	0·02	0·08	17
18	Other	0·03	0·01	0·69	0·54	1·20	1·17	0·11	0·13	2·11	1·85	3·96	0·18	0·21	0·39	2·29	2·06	4·35	0·39	0·24	0·64	2·68	2·30	4·98	18
19	Total	0·09	0·01	0·95	0·76	1·93	1·42	0·17	0·15	3·14	2·34	5·48	0·22	0·25	0·47	3·36	2·59	5·95	0·69	0·31	1·00	4·06	2·89	6·95	19
	Courses at other establishments																								
20	H.N.D./H.N.C. courses	0·01	—	0·12	0·11	0·20	0·08	0·04	—	0·37	0·18	0·55	0·03	0·07	0·10	0·40	0·25	0·66	0·05	0·06	0·11	0·45	0·31	0·76	20
21	O.N.D./O.N.C. courses	0·34	0·12	0·41	0·48	1·53	0·73	0·11	0·01	2·49	1·35	3·74	0·05	0·06	0·11	2·44	1·41	3·85	0·34	0·12	0·46	2·79	1·52	4·31	21
22	Catering courses	0·39	0·76	0·08	0·33	0·98	1·41	0·07	0·08	1·50	2·58	4·09	0·06	0·12	0·18	1·57	2·70	4·27	0·15	0·23	0·39	1·72	2·94	4·65	22
23	Nursing courses	0·01	1·36	0·01	0·36	0·03	3·44	0·01	0·24	0·06	3·40	3·46	—	0·10	0·10	0·06	3·50	3·57	—	0·24	0·24	0·06	3·74	3·81	23
24	Secretarial courses	0·04	3·11	0·01	2·54	0·06	10·07	—	0·71	0·12	16·43	16·55	—	0·41	0·41	0·12	16·84	16·96	—	1·36	1·36	0·12	18·20	18·32	24
25	G.C.E. "A" level courses	0·66	0·09	0·67	0·85	1·03	1·85	0·12	0·17	3·28	3·76	7·04	0·37	0·40	0·77	3·65	4·16	7·81	0·76	1·01	1·77	4·41	5·17	9·58	25
26	G.C.E. "O" level courses	1·59	1·64	0·24	0·15	2·09	1·74	0·14	0·17	4·06	3·70	7·75	0·12	0·04	0·16	4·18	3·73	7·91	0·34	0·08	0·42	4·51	3·81	8·33	26
27	Other courses	2·35	2·12	0·89	1·46	5·84	6·57	0·29	0·32	9·36	10·46	19·83	0·18	0·44	0·62	9·54	10·90	20·45	0·72	0·96	1·69	10·27	11·87	22·13	27
28	Unknown courses	0·78	1·10	0·19	0·23	1·93	2·81	0·08	0·15	2·98	4·28	7·26	0·06	0·17	0·23	3·04	4·45	7·49	0·28	0·42	0·70	3·32	4·87	8·18	28
29	Total	6·17	11·10	2·62	6·31	14·49	28·69	0·85	1·85	24·13	48·15	72·28	0·87	1·81	2·68	25·00	49·95	74·95	2·65	4·48	7·13	27·64	54·43	82·08	29
30	All full-time further education	6·48	11·45	12·41	15·80	29·92	43·50	1·57	2·37	50·37	73·13	123·50	4·77	5·28	10·05	55·14	78·41	133·54	8·63	7·19	15·82	63·77	85·59	149·36	30
	Temporary employment pending entry into(2)																								
31	Degree courses	0·02	0·01	0·51	0·46	0·51	0·37	0·04	0·01	1·09	0·85	1·93	0·26	0·17	0·43	1·34	1·02	2·36	0·93	0·41	1·34	2·27	1·43	3·70	31
32	Teacher training courses	0·02	0·02	0·09	0·08	0·11	0·11	0·01	0·02	0·22	0·25	0·47	0·05	0·01	0·06	0·27	0·26	0·53	0·13	0·04	0·17	0·40	0·33	0·73	32
33	Other courses	0·01	—	0·09	0·09	0·20	0·11	—	—	0·30	0·19	0·49	0·01	0·04	0·05	0·32	0·22	0·54	0·09	0·05	0·14	0·41	0·27	0·68	33
34	Total	0·05	0·04	0·68	0·62	0·82	0·59	0·05	0·03	1·60	1·28	2·88	0·33	0·22	0·55	1·93	1·50	3·43	1·15	0·50	1·65	3·08	2·00	5·08	34
35	Other employment	52·09	44·24	11·29	11·22	151·21	122·85	8·22	6·92	223·29	192·24	415·54	1·88	1·90	3·78	225·17	194·14	419·32	3·07	2·30	5·37	228·25	196·44	424·69	35
36	Unknown destinations	8·35	8·52	3·61	2·16	40·58	30·57	1·94	1·63	55·03	50·88	105·96	0·80	0·70	1·58	55·96	51·58	107·54	2·62	2·51	5·13	58·58	54·08	112·67	36
37	All leavers	67·56	64·25	27·90	29·60	222·53	212·52	12·28	10·97	330·34	317·53	647·87	7·86	8·10	15·96	333·21	325·63	663·83	15·48	12·49	27·96	353·63	338·11	691·80	37

(1) Secondary schools not separately classified.
(2) Entry into full-time further education will be not later than September-October 1976. See paragraph 19 of the Explanatory Notes.
(3) Including 13 boys and 1 girl who left direct grant technical and direct grant institutions schools.

Source: Sample survey

Section 2: The system of tertiary education

1. The system

The present system of higher education in Britain offers a wide choice not only of courses and institutions but of academic structure, social atmospheres and physical environments in which to study. For the range of courses, see the 149 subject headings in the handbook (Higher Education in the United Kingdom 1976-8, London: Longmans), many covering several disciplines. They comprise the "pure" academic humanities like history, English and foreign literature; the increasingly applied social sciences like sociology, politics, social work, economics and business studies; the pure and applied natural sciences like chemistry, physics, biology, metallurgy, geology and environmental studies; the medical sciences from anatomy to veterinary studies; and vocational technologies from agriculture through every kind of engineering to town and country planning. In the further education sector, one may study every vocational craft and skill from bricklaying to shorthand typing.

"The range of institutions is equally wide and is not restricted to the choice between a university and a public sector college. Both universities and other colleges differ enormously in size, situation, structure, appearance and in every other respect. Oxford and Cambridge are large, collegiate universities with upwards of 10,000 students, their ancient colleges scattered throughout and dominating comparatively small cities. St. Andrews and Durham are also old collegiate universities but smaller, with 3,000-4,000 students, and dominating much smaller cities. The main London colleges are medium-sized (1,000-5,000) but mostly on confined urban sites in one of the largest, most crowded but most exciting cities in the world, though Wye and Royal Holloway are in the countryside. The older civic universities are large unitary organisations with from 5,000 students (Reading or Nottingham) to 10,000 or more (Edinburgh and Manchester) and in crowded, bustling cities, though some are developing new campuses where slums used to stand (Manchester, Leeds, Sheffield). The younger ones are smaller (3,000-5,000) and often on spacious suburban sites (Exeter, Leicester, Southampton). Keele and the "New universities" of the 1960s are all small (2,000-4,000) and on newly built campuses in the green fields: some tightly knit complexes (Lancaster, East Anglia, Essex), some with scattered "pavilions in a park" (Sussex, Warwick, York); some are collegiate (Kent Lancaster, York), though the colleges are social rather than academic communities,others are unitary but divided into broad "schools of study" (Sussex, East Anglia, Ulster). The technological universities are much the same size, and some have moved out to new rural campuses (Bath, Brunel, Surrey) while others are redeveloping their old urban sites (Aston, Salford).

Academic structures also vary, and while the single-subject honours degree is still the norm in England and Wales, with combined honours avaialble in the humanities, pure sciences and

social sciences, Scotland has long had its multi-subject first year. Interesting new combinations and interdisciplinary courses, pioneered by, though not exclusive to the new universities, are emerging elsewhere: the foundation year on Western civilisation at Keele, the "contextual" courses at Sussex, the three-subject first year at Lancaster, liberal studies in science at Manchester, and so on. Whether one wishes to take a traditional single honours degree at a large, old, prestigious, bustling, metropolitan university, a general honours degree at an experimental, rural, campus university, or a professional qualification at an equally new technological university, urban or rural, one can find what one wants in the university sector

The public sector is still more versatile. In a polytechnic, technical college, college of commerce, college of art, drama or music, one can train full-time or part-time for a variety of qualifications such as: a degree; the Higher National Diploma or Certificate; the Art Teacher's Diploma and various advanced professional diplomas and certificates; the Ordinary National Diploma or Certificate; the craft and technical examinations of the City and Guilds of London Institute; the General Certificate of Education at Advanced or Ordinary level; or the certificates of the Royal Society of Arts in shorthand-typing, secretarial work and office practice. In a college of education one may train to be a graduate (BEd) or certificated teacher, and at some it is also possible to take general, non-professional courses; two-year diplomas in higher education and/or degrees in subjects other than education.

The further education colleges also vary in size and structure. There are polytechnics like Central London with over 12,000 students, many on advanced full-time and sandwich courses, small colleges of further education with few full-time and fewer advanced students, and evening institutes with none at all. Nearly all are in the centres of towns and cities within reach of their part-time clientele. The polytechnics and larger colleges, however, draw their full-time students from a wider field. Their degree courses, increasingly validated by the CNAA, whose boards and subject panels and external examiners include many university teachers, are based on modern developments in course design, eg polytechnic modular degrees.

Colleges of education also vary in size, character and situation, but for the most part they are small (under 1,000 students) and, with some exceptions such as the famous London colleges, tend to be situated in smaller towns and villages. But the day of the monotechnical institution for the teaching profession is over and, in order to provide a wider and more diversified higher education service, colleges are being amalgamated, merged with polytechnics or closed."

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2. Admission requirements

In Britain the minimum passport from secondary education to tertiary education is usually two passes in the Advanced level of the General Certificate of Education (GCE). The standard of A-level roughly corresponds to the French "bac". However within this broad statement there are a multitude of variations. The A-level is available in many subjects/disciplines: in all awards may be at five levels; A to E. Each institution of tertiary education specifies not only number and the subjects but also grades of A-levels it requires of the individual students who seek admission. However other criteria may also exist. The Committee of Vice-Chancellors and Principals write:

> "In the United Kingdom the selection is the prerogative of individual institutions. They select mainly on the basis of the results attained in the advanced level examinations taken in secondary education. Most institutions however admit a small proportion of 'mature' students with a wider range of qualifications, both formal and informal. They may also use other information, such as confidential reports from the applicants' schools, and the practice of interviewing at least some of those who apply is widespread."

In general the requirements are related to demand: thus a student wishing to study English literature at Oxford may need to achieve grade As in the prescribed A-level subjects; a student wishing to read Theology at a less well-known polytechnic may be able to gain admission with two D or E grades. For non-degree courses admission requirements may be even lower. Moreover, all institutions are able to waive some or all of the admission requirements in special cases - for example for mature students with relevant experience. Alone amongst tertiary institutions, the Open University has no admission requirements though perspective students are often advised to achieve specified preliminary qualifications to equip them to follow the courses envisaged.

In general it is true to say that there is no "numerus clausus" in Britain. Yet it is also clear that there are both quantitative and qualitative considerations that affect student entry. The Committee of Vice-Chancellors and Principals write:

> "In the United Kingdom, institutions of higher education traditionally select students from among qualified school leavers and students from colleges of further education. Therefore, the problem of numerus clausus as such has not manifested itself. However it can be established that there is an excess of demand over places in medicine, law and English, whereas the number of places exceeds the demand in some science and foreign language subjects."

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The situation may best be summed up by a quotation from Higher Education in the United Kingdom 1976-78:

> "The demand from qualified applicants for places in universities in Britain, and (though to a lesser extent) in polytechnics, colleges of technology and other institutions of higher education, is often greater than the number of places available. All entry is competitive; each university and college controls the admission of students to its own courses; and possession of the minimum qualifications does not mean that the holder can be sure of finding a place."

A useful guide to admissions policy in the universities is the following sample table of examination qualifications and subjects of acceptance of home candidates in 1975. (Table G) This table possibly gives as clear a picture as any of the admission rules. But it can give no indication of the changing demand for and supply of places from year to year nor of the detailed individual consideration of individual candidates by individual universities and their departments which, in certain circumstances, may be "designed to stimulate participation of disprivileged groups". The open access policies of the Open University constitute a prize example of such considerations.

Enrolment

"In the United Kingdom, the enrolments in tertiary education increased by about one-half between 1954 and 1960, more than doubled in the next decade, but have grown very much more slowly in the three years 1971 to 1973. Therefore the government's forecasts of enrolments by 1981 have been subject to regular downward revision, from a forecast of 750,000 in 1972, to 700,000 and then 640,000 in 1974. In 1976 a figure of 600,000 was envisaged, followed by a revision in 1977 down to 560,000. These revisions are not due to demographic factors since the size of the 18-year old age-group will increase between now and 1980. Fundamentally, the need for successive revisions can be attributed to revisions in the forecasts of the numbers who will qualify to enter tertiary education. The previous growth in the proportion of the age-group staying on at school has slowed down as well as the proportion obtaining the required qualifications for admission to tertiary education. A more recent factor is an apparent decline in the willingness of qualified leavers to take up tertiary education.

Since 1967 there are no marked shifts in the flow to various subject groups - although there are emerging trends that suggest an increasing preference of students for courses related to a professional qualification rather than those leading to a more general qualification. Thus courses in architecture, medicine, law, civil engineering and accountancy are experiencing increasing student applications. The enrolments

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Table 6 Examination qualifications and subject of acceptances accepted home candidates SAMPLE 1975

Subject	GCE Advanced subjects: 'Score' on 3 subjects 15-		12-9		8-3		'Score' on 3 subjects 10-8		7-5		4-2		GCE Advanced subjects (totals)		Scottish qualifications		ONC OND		HNC HND		Degree of UK university		Other UK qualifications		Unidentified or overseas qualifications		Total	%	Subject
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	(Men & Women)		
I Education																													I Education
Sub-total group I	–	1	3	8	2	5	–	1	–	2	1	2	6	19	–	–	–	–	–	–	–	–	2	–	–	–	27	0·4	Sub-total group I
II Medicine, dentistry and health																													II Medicine, dentistry and health
3 Medicine	103	50	66	41	3	–	2	–	1	2	–	–	177	93	12	7	–	–	–	–	3	2	1	–	–	–	295	4·5	3 Medicine
4 Dentistry	6	3	27	11	19	12	–	–	1	–	2	1	55	27	3	2	–	–	–	–	–	1	–	–	–	–	83	1·3	4 Dentistry
5 Pharmacy	4	9	18	14	11	15	2	–	–	–	–	1	36	29	2	8	–	1	1	–	–	–	–	–	–	–	87	1·3	5 Pharmacy
Remainder of group	2	5	11	11	11	7	–	–	3	3	3	–	30	26	1	1	–	–	–	–	2	–	–	–	–	–	60	0·9	Remainder of group
Sub-total group II	117	67	123	77	44	34	4	–	5	5	5	2	293	185	18	18	–	1	1	–	5	3	1	–	–	–	520	8·1	Sub-total group II
III Engineering and technology																													III Engineering and technology
10 Civil engineering	15	–	53	1	53	1	2	–	7	–	12	–	142	2	27	1	12	–	5	–	–	–	–	–	1	–	190	2·9	10 Civil engineering
11 Electrical engineering	22	1	53	–	50	1	2	–	11	–	15	2	153	4	6	–	18	1	4	–	–	–	4	–	2	–	192	2·9	11 Electrical engineering
12 Mechanical engineering	15	–	30	1	35	–	1	–	6	–	5	–	92	1	2	–	15	1	4	–	–	–	3	–	2	–	120	1·8	12 Mechanical engineering
16 Other general & combined engineering subjects	45	2	17	2	18	1	–	–	3	–	4	–	87	5	7	–	4	–	1	–	–	–	–	–	–	–	104	1·6	16 Other general & combined engineering subjects
Remainder of group	29	1	44	4	64	5	2	–	12	1	25	2	176	13	5	–	7	1	2	–	–	–	1	–	5	–	210	3·2	Remainder of group
Sub-total group III	126	4	197	8	220	8	7	–	39	1	61	4	650	25	47	1	56	3	16	–	–	–	8	–	10	–	616	12·5	Sub-total group III
IV Agriculture, forestry and veterinary science																													IV Agriculture, forestry and veterinary science
Sub-total group IV	15	8	16	13	30	10	2	1	4	2	8	2	75	34	4	4	1	–	–	–	–	–	–	–	1	1	120	1·8	Sub-total group IV
V Science																													V Science
25 Biology	8	4	28	16	26	26	1	1	11	4	2	3	74	54	12	10	–	–	3	1	–	–	1	–	1	–	156	2·4	25 Biology
26 Biochemistry	5	4	17	10	22	8	–	–	2	3	3	–	49	25	8	2	–	1	3	–	–	–	–	–	–	2	90	1·4	26 Biochemistry
28–29, 30 Other biological sciences	11	5	37	23	50	29	3	4	9	10	11	5	121	76	5	1	1	1	–	–	–	–	–	–	1	–	206	3·1	28–29, 30 Other biological sciences
31 Mathematics	78	17	55	28	35	16	3	2	13	4	12	3	197	69	11	8	1	–	3	–	–	–	1	1	2	2	295	4·5	31 Mathematics
33 Physics	54	4	47	5	38	4	1	–	11	–	8	1	159	14	10	4	7	–	–	–	1	–	1	–	–	–	195	3·0	33 Physics
34 Chemistry	30	7	41	13	45	7	1	–	3	–	19	6	139	33	14	6	6	1	1	–	1	–	1	–	3	–	205	3·1	34 Chemistry
35, 36 Environmental sciences	7	5	37	5	16	9	4	1	7	2	3	–	74	22	6	–	–	–	1	–	–	–	–	1	1	1	108	1·6	35, 36 Environmental sciences
32, 37 General and combined physical sciences	8	4	14	2	14	4	2	–	–	–	3	1	44	14	2	2	4	–	1	–	–	–	–	–	1	–	68	1·0	32, 37 General and combined physical sciences
38 Combinations of biological & physical sciences	55	5	13	16	37	14	1	–	11	4	15	6	133	45	2	4	–	1	–	–	1	–	1	–	1	–	187	2·9	38 Combinations of biological & physical sciences
39 Combinations of V with VI–IX	9	4	23	12	11	25	1	1	5	2	4	2	53	45	1	3	–	1	–	–	–	–	–	–	1	1	106	1·6	39 Combinations of V with VI–IX
Sub-total group V	264	69	313	130	294	142	17	9	72	32	83	26	1,043	398	73	40	19	5	12	1	1	–	5	2	11	6	1,610	24·7	Sub-total group V
VI Social, administrative and business studies																													VI Social, administrative and business studies
40 Business management studies	1	1	34	10	31	5	2	2	8	1	3	–	79	19	9	1	1	–	1	–	–	–	1	–	3	–	114	1·7	40 Business management studies
41 Economics	28	3	48	11	53	9	4	–	18	7	3	2	154	32	5	2	5	1	–	–	–	–	3	–	2	–	204	3·1	41 Economics
42 Geography	16	23	58	38	29	12	6	7	10	9	2	–	121	83	3	3	1	–	–	–	–	–	1	–	2	1	221	3·4	42 Geography
45 Law	52	30	100	39	8	8	8	1	5	3	2	1	175	81	22	9	3	1	–	–	–	1	1	2	2	2	299	4·6	45 Law
46 Psychology	1	8	13	30	12	22	1	2	5	5	–	2	32	69	–	4	1	–	2	–	1	–	3	7	3	2	124	1·9	46 Psychology
47 Sociology	1	7	12	28	23	42	2	8	8	9	3	3	49	95	2	4	2	2	–	–	–	–	3	6	–	3	166	2·5	47 Sociology
49 Combinations within group VI	25	11	61	27	45	27	8	9	20	15	7	4	172	93	16	10	2	2	–	–	–	–	5	7	3	4	314	4·8	49 Combinations within group VI
50 Combinations of VI with VII–IX	14	8	32	22	20	24	3	3	7	12	4	3	60	72	7	6	–	–	–	–	1	–	3	–	2	1	172	2·6	50 Combinations of VI with VII–IX
Remainder of group	9	6	34	5	22	8	1	–	4	5	2	1	72	25	10	1	1	1	–	–	–	–	1	1	1	1	114	1·7	Remainder of group
Sub-total group VI	947	97	392	209	243	167	35	30	91	61	26	16	934	575	74	40	16	7	3	–	2	1	21	23	18	14	1,723	26·4	Sub-total group VI
VII Architecture and vocational studies																													VII Architecture and vocational studies
Sub-total group VII	8	1	23	15	14	6	–	1	3	–	–	2	48	25	10	1	–	–	4	–	2	–	1	–	1	–	92	1·4	Sub-total group VII
VIII Languages, literature and area studies																													VIII Languages, literature and area studies
55 English	41	44	44	77	14	16	5	18	10	12	4	1	118	169	7	12	–	–	–	–	1	1	1	4	2	1	315	4·8	55 English
57 French language and studies	9	22	7	36	5	20	2	3	1	7	–	–	24	88	2	14	–	–	–	–	–	–	–	1	–	2	131	2·0	57 French language and studies
56, 58, 59 Other European languages	2	7	16	19	11	11	3	–	1	5	–	1	33	43	1	4	–	–	–	–	–	–	–	1	–	–	83	1·3	56, 58, 59 Other European languages
60, 61 Combined European languages	17	31	9	32	3	11	–		4	6	–	–	33	81	3	8	–	–	–	–	–	–	–	1	–	3	130	2·0	60, 61 Combined European languages
62–65 Non-European and classical languages	19	12	18	12	9	4	1	–	2	2	2	1	51	31	3	–	–	–	1	–	1	1	–	–	–	1	59	1·4	62–65 Non-European and classical languages
67 Combinations within group VIII	11	15	15	11	2	8	4	4	1	2	4	2	37	42	1	2	–	–	–	–	–	–	–	–	1	–	83	1·3	67 Combinations within group VIII
68 Combinations of VIII with IX	18	18	31	43	14	25	3	5		13	–	5	71	114	6	6	–	–	–	–	–	–	2	–	1	1	201	3·1	Combinations of VIII with IX
IX Arts other than languages																													IX Arts other than languages
69, 70 History and science/technology	32	29	57	46	21	20	8	7	10	11	2	1	131	114	12	13	–	–	–	–	–	1	4	3	–	–	278	4·2	69, 70 History and science/technology
71, 72 Philosophy and theology	3	3	12	7	10	7	3	1	9	4	5	–	43	22	6	–	1	–	–	–	2	–	1	2	–	2	83	1·3	71, 72 Philosophy and theology
73–75 Art, design, music, drama	7	13	15	15	11	13	2	5	9	8	2	3	46	57	–	2	–	–	–	–	1	–	2	–	–	2	110	1·7	73–75 Art, design, music, drama
76 Arts general and combinations within group IX	4	9	9	20	9	17	1	2	6	6	3	1	32	51	6	12	–	–	–	–	–	–	4	–	–	–	114	1·7	76 Arts general and combinations within group IX
Sub-total groups VIII and IX	183	203	233	329	115	162	33	47	63	78	22	15	624	862	45	73	1	–	1	–	6	3	14	12	4	12	1,017	24·7	Sub-total groups VIII and IX
Total, all subjects	840	433	1,300	790	962	514	98	89	272	184	206	89	3,078	2,093	271	177	93	19	37	1	16	7	62	37	45	33	6,548	100	Total, all subjects
Comparative totals based on previous coding	(790)	(410)	(1,325)	(760)	(987)	(532)	(301)	(69)	(272)	(184)	(206)	(69)	(3,081)	(2,023)															

in colleges of education - concerned with teacher training as a percentage of the enrolments in tertiary education, have however decreased, following projections of falling teacher requirements."

The annual growth in enrolment in post secondary education is seen in the following tables (Tables G.1, G.2 and G.3)

Table G.1 Annual growth of enrolments in post-secondary education (United Kingdom) (in %)

	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75
University type		+ 5.83	+ 4.02	+ 4.06	+2.97	+ 1.75	+ 1.79	+ 2.57
Non-university type		+11.78	+ 4.65	+ 4.63	+4.34	+ 1.02	+ 3.91	- 2.17
Total higher education		+ 8.61	+ 4.32	+4.34	+3.63	+ 1.78	+2.82	+ 0.23

Table G.2 Annual growth of new entrants in university type of education (United Kingdom) (in %)

	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75
University type		+4.61	+4.53	+ 2.28	+1.87	+1.61	+ 1.34	+1.08

Table G.3 Total enrolments by field of study

	1968-69	1970-71	1972-73	1973-74	1974-75
Theology					
Law					
Economics	42382	46401	30792	53261	55920
Political Science					
Medicine	21210	22859	24624	26029	27105
Philosophy	25755	26475	28181	28736	29456
Literature					
Pharmacy					
Interpretation					
Technology	38255	40207	40648	40062	40451
Agriculture	4297	4592	4501	4579	4741
Veterinary					
Arts	17233	21785	21948	22447	22312
Diverse					
Sciences and Maths					
Dentistry	54631	56527	59903	59679	60023
Education	8115	9160	8761	9231	9947
Total	217625	235556	246813	251226	257684

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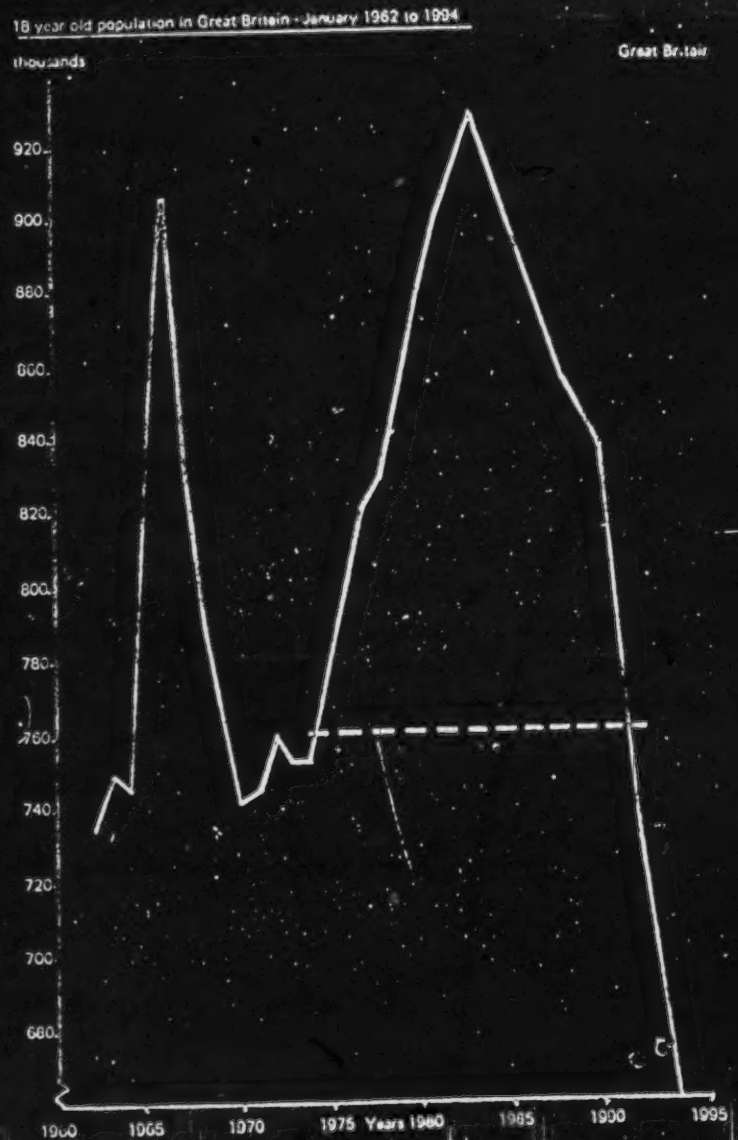
The graph (Table H) shows the relevant population profile to 1994 (though of course it cannot show the proportion of the group who will wish to seek entry to universities, polytechnics or colleges). A particular dilemma is the decision whether or not to "tunnel" as the dotted line indicates - or to increase the number of places to match the rising age groups in the short term.

Table II



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Sex and age distribution of enrolments

The figures for university undergraduates for 1970-76 are as indicated in Table I, showing over the period a somewhat uneven age distribution and a somewhat more even sex distribution.

Table I Age distribution of undergraduates United Kingdom. By sex and age

1970

	Men	Women	TOTAL
18 and less	19650	12074	31724
19	30543	15369	45912
20	31062	14792	45854
21	22946	8774	31720
22	11946	3235	15981
23	6448	1315	7763
24	3390	491	3981
25-29	5005	1127	6132
30+	2861	1308	4169
TOTALS	133851	58585	192436

1972

	Men	Women	TOTAL
18 and less	20165	12522	32687
19	31217	17345	48562
20	31843	17037	48880
21	22310	9593	31903
22	11149	3589	14738
23	5891	1440	7331
24	3409	744	4153
25-29	5908	1369	7277
30+	2857	1519	4376
TOTALS	134749	65158	199907

1974

	Men	Women	TOTAL
18 and less	19852	13332	33184
19	30884	18536	49420
20	32581	18495	51076
21	23229	11336	34565
22	11350	4459	15809
23	5768	1711	7479
24	3246	850	4096
25-29	6401	1946	8347
30+	2965	2135	5100
TOTALS	136278	72800	209078

1976

	Men	Women	TOTAL
18 and less	21313	14327	35640
19	33601	20484	54085
20	34525	20355	54880
21	24613	12843	37456
22	12383	5342	17725
23	6524	2157	8681
24	3475	1044	4519
25-29	6727	2359	9086
30+	3465	2732	6197
TOTALS	146626	81643	228269

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The percentage of undergraduates proceeding to graduate education are shown in Table J

Table J Percentage of undergraduates going on to postgraduate higher degree research (excluding teacher training)

61 62	16 8%
62 63	18 1%
63/64	19.8%
64 65	20 6%
65/66	19 8%
66 67	20.2%
67/68	18 5%
68/69	18.0%
69 70	17.1%
70/71	15 1%
71/72	13.6%
72 73	12.7%
73/74	11.6%
74/75	12.2%
75/76	12.3%

These figures exclude medical, dentistry and veterinary science higher degrees.

They show an uneven but unmistakable fall since the peak in the mid 1960s, reflecting in part, the declining opportunities for academic employment and research of more recent years.

3 Research in tertiary education

Research has always been seen as an important role of the university - as important or even more important than teaching. Research may be institutional in which university or departmental programmes are undertaken often funded by private foundations or government research funding bodies such as the Social Science Research Council, the Science Research Council and the Medical Research Council. Alternatively, it may be individual research undertaken by members of staff. Indeed most universities have a requirement to "undertake research" that is written into the contract under which academic staff are appointed. A normal expectation of research activities would "in its broadest sense" be one-third to half of the working week: more in a "research oriented" department, less in a "teaching oriented" one. Traditionally the universities have specialised in pure research for which no immediate or urgent application was envisaged: applied research has been seen to be more the responsibility of industry and commerce. Yet in recent years universities have undertaken very substantial applied research commitments very frequently under contract from government departments (particularly in the field of applied social research) and from industry. Reservations about undertaking "commercial research" have largely disappeared from most British universities. Indeed such contracts are keenly sought.

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The polytechnics and other "public sector" institutions have, on the whole, a more limited research orientation. In the past, all have been predominantly teaching organisations. But at the present time they are making strenuous efforts to establish a research involvement that matches the universities and are achieving a considerable success in this, both through the efforts of individual members of staff and through successful competition for public and private research funds.

Unfortunately, there is no easy way to quantify the changing research output of British institutions of tertiary education in the late 1970s. The reports of the private foundations and government funding bodies show an overall slowing or even a decline of support in real terms. But within those figures there is evidence of a relative increase in funding of research in non-university institutions of tertiary education though university and university linked institutions still receive a substantial majority of available funds. There are no reliable indications of the distribution of industrial and commercial funds though there is evidence that some of the polytechnics have a well-established record in obtaining them. Concerning the most widespread research activity - that of individual academics, there are simply no records other than those "lists of publications", completed theses and the public recognition that the most illustrious achieve. But it is clear that individual distinction in research, like research itself, is now spread more widely throughout tertiary education than heretofore.

4. Costs of tertiary education

"The two sectors of the binary system are administered and financed quite separately Apart from Northern Ireland where the government funds all institutions of higher education directly, the universities of Britain, with the exception of the Royal College of Art and Cranfield Institute of Technology with their direct grants from the DES, are financed mainly through a unique British institution, the University Grants Committee. A committee of unpaid senior academics and leading business and professional men under a full-time chairman (the only paid member), it advises the government on the universities' needs and distributes the block grant it receives between them as it thinks fit. As a buffer between the universities and direct state control, it is the main safeguard of university autonomy

In recent years, however, the UGC has become less of a buffer and more of an instrument of government policy. In 1964 it was transferred from the Treasury to the DES which, with the opening of the universities to parliamentary audit in 1968, gained direct access to their accounts. With the enormous increase in the costs of higher education the UGC recurrent grant has risen from £9 million in 1947-48, to £55 million in 1961-62,

and to £426 million in 1974-75. Capital grants for buildings, equipment and furniture have fluctuated, from about £4 million a year in 1947-52, to £83 million in 1965-66 in the expansionist period, and back to £33.5 million in 1974-75 in the current deceleration of growth. The UGC now provides about 90 per cent of both recurrent and capital expenditure, the rest coming from fees, endowments, donations and research contracts. With such large sums at stake the UGC has been forced to increase its supervision of university expenditure, by means of "memoranda of guidance" recommending certain developments and discouraging others, and by a tight control of new buildings and capacity planning, exercised through a Secretariat of over a hundred officials. At a time of steep inflation, UGC limits on expenditure are forcing the universities to make large economies and to take more students without corresponding increases in staff or facilities.

The further education sector is financed by the Department of Education and Science in England and Wales, the Scottish Education Department and the Northern Ireland government, and - in Britain - mainly through the local authorities (except for the thirteen central institutions financed directly by the Scottish Education Department) In England and Wales the voluntary colleges of education and certain other institutions receive direct grants from the DES. Further education in England and Wales is co-ordinated by a system of National and Regional Advisory Councils, representing the DES and other government departments, the various professional and industrial associations, the examining boards, the local authorities and the teachers. They attempt to ensure that courses in each area are adequate without unnecessary duplication. Most local authority income for further education comes in the form of a block grant, but the DES controls expenditure, both recurrent and capital, more formally but in much the same way as the UGC controls the universities."

In the United Kingdom the growth of recurrent grants for the universities has, according to the available figures, continued at least until the year 1973/1974. In December 1973 the British Government announced that, contrary to former practice, no supplement for increases in costs, due to inflation and annually measured by the index of university costs, on items other than salaries of academics and those paid on related rates, would be made during the year 1974/1975. Academic and academic-related salaries account for about half of university expenditure and it was formerly the practice for increases here to be fully matched by additional, government grants. In the event, costs rose about 12% in 1973 and just over 29% in 1974. In this situation universities faced severe financial difficulties, which obliged the government to make special grants. The supplementary grants represented, however,

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only one third of the additional sum necessary to maintain the universities' recurrent grant in real terms. During the period 1972-77 the value of recurrent income per student has declined in real terms by more than 6%

5. The labour market

A guide to the contribution of tertiary education to the labour market can be seen in Tables K and L, which show the entry of first degree and postgraduate degree holders to the labour market. The wide ranging distribution is typical not only of university but polytechnic and college graduates and indicates the importance of the close liaison that increasingly exists between institutions of tertiary education and employers - through a developed network of careers officers, appointments officers, counsellors and committees and also through a wide range of informal agencies. Indeed it is in this contact and the understandings that have given rise to it that probably constitute the most important process for reform in the United Kingdom universities in the late 1970s.

Conclusion

This report, assembled from a variety of contemporary sources, has attempted to review some of the major trends in British tertiary education. In conditions of fundamental demographic, economic and technological change, it is impossible to predict or even comment in detail on the behaviour of predominantly autonomous institutions and individuals within them. Major initiatives - such as the report of the Oakes Committee on tertiary education in the public sector are due early in the new year but are not at present available. But even now, it is clear that this committee or indeed any other set of recommendations for policy initiatives is unlikely to institute a major structural or functional change in the dominant pattern of a binary yet interrelated system of tertiary education in Britain.

Table K — Type of Work Categories of Men and Women Graduates from United Kingdom Universities who entered Home Employment 1975-76

FIRST DEGREES

	General Management	Scientific Research Design & Development	Environmental Planning	Routine Scientific Analysis & Investigation	Production Operation & Maintenance	Buying, Marketing & Selling	Management Services	Financial Work	Legal Work	Information, Advisory & Non-Scientific Research Work	Personnel, Social & Medical Auxiliary Work	Teaching and Lecturing	All Others	Grand Total
Education	8	1	–	–	–	6	2	6	–	1	18	340	4	386
Medicine, dentistry and health	7	36	–	55	3	8	6	5	–	3	3882	2	3	4110
Engineering and technology	349	1189	837	177	1291	89	153	125	3	11	22	14	19	4329
Agriculture, forestry and veterinary science	12	25	2	29	108	48	34	9	–	4	156	3	9	439
Science	359	966	37	631	286	236	995	871	18	136	195	146	133	5009
Social, administrative and business studies	662	41	103	19	100	460	160	1659	796	176	858	90	207	5331
Architecture and other professional and vocational subjects	18	3	374	2	41	14	3	10	–	31	4	2	3	505
Language, literature and area studies	318	3	7	5	14	222	36	289	26	180	180	90	243	1613
Arts other than languages	257	2	7	10	21	139	33	211	34	132	215	93	177	1531
1975–76 Total	1990	2266	1417	928	1864	4222	1422	3185	877	674	5530	780	799	23953
1974–75	2032	2310	1617	910	1858	829	1313	3042	749	752	5284	857	683	22385
1973–74	2006	2581	1049	1020	1543	927	1555	2691	822	833	5019	952	2437	23735
Percentage of Total MEN and WOMEN	3.5	4.0	2.5	1.6	3.3	2.1	2.5	5.6	1.5	1.2	9.8	1.4	1.4	40.3
Percentage of Total MEN and WOMEN entering Home Employment	8.6	9.8	6.1	4.0	8.1	6.3	6.2	13.8	3.8	2.9	24.4	3.4	3.5	100.0

Table 18: Type of Work Categories of MEN AND WOMEN Higher Degree Graduates [illegible] Kingdom Universities who entered Home Employment 1975–76

	General Management	Scientific Research Design & Development	Environmental Planning	Routine Scientific Analysis & Investigation	Production Operation Maintenance	Buying, Selling	Management Services	Financial Work	Legal Work	Information, Advisory & Non-Scientific Research Work	Personnel, Social & Medical Auxiliary Work	Teaching and Lecturing	All Others	Grand Total
1 Education	11	4	–	–	–	–	6	1	–	9	25	135	5	196
2 Medicine, dentistry and health	5	86	3	17	2	2	4	–	–	7	82	51	3	262
3 Engineering and technology	30	376	83	40	109	10	62	13	–	7	7	82	3	822
4 Agriculture, forestry and veterinary science	5	42	7	4	9	1	12	–	–	7	6	35	–	128
5 Science	45	571	16	123	31	17	131	35	4	52	26	269	12	1332
6 Social, administrative and business studies	74	47	10	4	28	59	60	94	23	93	183	231	11	922
7 Architecture and other professional and vocational subjects	4	8	117	–	2	–	12	6	–	81	2	8	1	241
8 Language, literature and area studies	17	–	–	1	1	7	1	7	1	22	12	190	16	275
9 Arts other than languages	18	8	–	2	–	2	–	8	–	32	16	121	11	218
1975–76 Total	209	1142	236	191	182	98	288	164	28	315	359	1162	62	4456
1974–75	197	1203	291	203	170	93	357	205	25	369	348	1359	67	4925
1973–74	178	1403	221	205	182	112	378	186	26	271	324	1291	133	4911
Percentage of Total MEN and WOMEN	1.2	6.6	1.4	1.1	1.1	0.6	1.7	0.9	0.2	1.8	2.1	6.8	0.4	25.7
Percentage of Total MEN and WOMEN entering Home Employment	4.7	25.6	5.3	4.3	4.1	2.2	6.5	3.7	0.6	7.1	8.1	26.5	1.4	100.0